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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,955	07/15/2003	David T. Jennings III	BRI/026	7794

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EXAMINER

GREENE, DANIEL LAWSON

ART UNIT PAPER NUMBER

3641

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/619,955	<b>Applicant(s)</b> JENNINGS, DAVID T.	
	<b>Examiner</b> Daniel L Greene Jr.	<b>Art Unit</b> 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/15/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>FEB 12 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group II (claims 8-20), species A (unbranched bus) in the reply filed on 1/28/2005 is acknowledged.

The traversal is on the ground(s) that the restriction requirement incorrectly asserts that groups I and II each fall under different subclasses of class 102.

First the examiner would like to thank applicant for pointing out the supposed deficiencies in the classifying of the groups. However, review of 102/206 and 200 classification definitions reveals the following:

#### **200 IGNITING DEVICES AND SYSTEMS:**

This subclass is indented under the class definition. Subject matter for initiating the combustion or detonation of explosive or thermic compositions or charges.

Note. Illustrative of the devices and systems of this subclass type are missile and ordnance fuses, both mechanical and electrical, and priming and igniting devices and systems not specifically provided for elsewhere in this class.

Note. Systems, as used in this subclass and the subclasses indented hereunder, refer to a plurality of electrical, mechanical and/or explosive elements all acting in a pattern or sequence to cause detonation or combustion of a main explosive such as a warhead or propellant. Typical of such systems is the type commonly referred to as a firing train.

#### **206 - Ignition or detonation circuit:**

This subclass is indented under subclass 200. Subject matter comprising an electrical circuit, or components of an electrical circuit to supply electrical energy to an igniting device.

Review of group II (Claims 8-20) clearly indicate a lack of an electrical circuit and components of an electrical circuit to supply electrical energy to an igniting device since

the claims do not disclose that the detonators are connected to anything per se. Further more Group I requires a search in class 361 wherein Group II does not.

Whether group II is properly classified in 102/200 or subclass 206. The fact remains that the inventions are distinct for the reasons given (i.e., The process as claimed can be practiced by another materially different apparatus, such as the prior systems, wherein it is understood that “flags” read on sensors that must be active to allow the activation of the initiator during the firing sequence as set forth in the prior art system of 6,584,907 (Boucher)) and in any event the product as claimed can be used in a materially different process such as initiating an automatic sprinkler system, and that the groups have acquired a separate status in the art as shown by their different classification.

Note that none of the independent claims recite munitions. Obviously, this is the intended application by applicant. MPEP § 806.05(e) requires one-way distinction either: the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. In this case, the process as claimed can be practiced by another materially different process, such as electronic detonators employing automatic sensors that indicate parameters necessary for allowing the initiation of the detonator.

Mirroring the claim language between method and apparatus does not prevent restriction between the two groups.

For the reasons above the restriction between groups I and II is proper.

2. Applicant argues that the species restriction/election between figures 1 and 2 is improper. Applicant states that it is unclear what the distinction of a branched versus an unbranched bus has to do with the present claims since none of the claims refer to this feature and all are generic to the embodiments of Figs. 1 and 2.

Applicant is referred to MPEP § 806.04(e). Claims are never species. Species are always specifically different embodiments. Restriction/election between the disclosed embodiments is proper.

As set forth above the restriction/election requirement is deemed proper and is therefore made **FINAL**.

3. Claims 1-7 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 1/28/2005.

***Information Disclosure Statement***

4. A signed and dated copy of applicants PTO-1449 received 12 Feb 2005 is attached to the instant application.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**6. Claims 8-20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent Application Publication US2003/0101889 A1 published 5 June 2003 to Hallin et al.**

Hallin clearly discloses claim 8, an electronic detonator (10) having one or more status flags in Figures 1-3 and paragraphs 0013 and 0014,

Claim 9, wherein said detonator is configured and/or programmed to operate in response to the setting of at least one status flag in paragraph 0048,

**Please note that statements as to possible future acts or that the detonator operates in response to the setting of at least one status flag is essentially a method limitation or a statement of intended or desired use and does not serve to patentably distinguish the claimed structure over that of the references. See *In Re Pearson*, 181 USPQ 641; *In re Yanush*, 177 USPQ 705; *In re Finsterwalder*, 168 USPQ 530; *In re Casey*, 152 USPQ 235; *In re Otto*, 136 USPQ 458; *Ex parte Masham*, 2 USPQ 2<sup>nd</sup> 1647.**

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. *In re Danly*, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2<sup>nd</sup> 1525, 1528

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon, does not serve to limit an apparatus claim.

Claims 10 and 16, wherein said status flags include a bus detection status flag in paragraph 0050,

Claims 11 and 17, wherein said status flags include a charge status flag in paragraph 0056-0057,

Claims 12 and 18, wherein said status flags include a calibration status flag in paragraphs 0052-0054,

Claims 13 and 19, wherein said status flags include a firing command status flag in paragraph 0058,

Claims 14 and 20, wherein said status flags include one or more status flag that cannot be set high before another status flag has been set high in paragraphs 0053-0055 wherein it is understood that the frequency calibration complete flag cannot be set without the frequency calibration being allowed first.

**Please note that statements as to possible future acts or that one or more status flags must be set high before another status flag is essentially a method limitation or a statement of intended or desired use and does not serve to patentably distinguish the claimed structure over that of the references. See In Re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 152 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.**

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2<sup>nd</sup> 1525, 1528

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon, does not serve to limit an apparatus claim.

Claim 15, an electronic blasting system comprising: a) a blasting machine (11,12) a bus (13) and at least one electronic detonator (10) having one or more status flags in Figures 1-6, paragraphs 0013-0015, 0047-0062 and claims 1-28.

**7. Claims 8-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,173,651 B1 to Pathe et al.**

Pathe discloses an electronic detonator (1) having one or more status flags in column 2 lines 25-45, column 7 lines 46-55 and column 12 lines 54-65 wherein it is understood that binary pieces of information relating to operating states reads on applicants term "flag",

Claim 9, wherein said detonator is configured and/or programmed to operate in response to the setting of at least one status flag in column 4 lines 61-65,

**Please note that statements as to possible future acts or that the detonator operates in response to the setting of at least one status flag is essentially a method limitation or a statement of intended or desired use and does not serve to**



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**patentably distinguish the claimed structure over that of the references.** See In Re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 152 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2<sup>nd</sup> 1525, 1528

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon, does not serve to limit an apparatus claim.

Claims 10 and 16, wherein said status flags include a bus detection status flag in column 2 lines 25-26,

Claims 11 and 17, wherein said status flags include a charge status flag in column 10 lines 17-32,

Claims 12 and 18, wherein said status flags include a calibration status flag in column 13 lines 10-15,

Claims 13 and 19, wherein said status flags include a firing command status flag in column 4 lines 3-5,

Claims 14 and 20, wherein said status flags include one or more status flag that cannot be set high before another status flag has been set high in column 13 lines 10-

15 wherein it is understood that the ignition modules cannot be loaded (firing command) without the test, calibration and delay times being performed, flagged or recorded first.

**Please note that statements as to possible future acts or that one or more status flags must be set high before another status flag is essentially a method limitation or a statement of intended or desired use and does not serve to patentably distinguish the claimed structure over that of the references. See In Re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 152 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.**

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2<sup>nd</sup> 1525, 1528

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon, does not serve to limit an apparatus claim.

Claim 15, an electronic blasting system comprising: a) a blasting machine (17) a bus (50) and at least one electronic detonator (1) having one or more status flags in Figures 1-6, the rejection of corresponding parts above and claims 1-11.

**8. Claims 8-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,460,093 to Prinz et al.**

Prinz discloses an electronic detonator (10) having one or more status flags in Figures 1-8, column 5 lines 17-31, column 7 lines 44-46, column 9 lines 59-62 and column 10 lines 23-27 wherein the output of NAND gates reads on applicants term "flag",

Claim 9, wherein said detonator is configured and/or programmed to operate in response to the setting of at least one status flag in column 9 lines 59-61,

**Please note that statements as to possible future acts or that the detonator operates in response to the setting of at least one status flag is essentially a method limitation or a statement of intended or desired use and does not serve to patentably distinguish the claimed structure over that of the references. See *In Re Pearson*, 181 USPQ 641; *In re Yanush*, 177 USPQ 705; *In re Finsterwalder*, 168 USPQ 530; *In re Casey*, 152 USPQ 235; *In re Otto*, 136 USPQ 458; *Ex parte Masham*, 2 USPQ 2<sup>nd</sup> 1647.**

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. *In re Danly*, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 2<sup>nd</sup> 1525, 1528

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon, does not serve to limit an apparatus claim.

Claims 10 and 16, wherein said status flags include a bus detection status flag in column 5 lines 17-31,

Claims 11 and 17, wherein said status flags include a charge status flag in column 7 lines 44-47 and column 10 lines 23-27,

Claims 12 and 18, wherein said status flags include a calibration status flag in column 6 lines 49-55,

Claims 13 and 19, wherein said status flags include a firing command status flag in column 10 lines 41-42,

Claims 14 and 20, wherein said status flags include one or more status flag that cannot be set high before another status flag has been set high in column 5 lines 18-31 and Figure 3 wherein it is understood that the ATTENTION flag must be set before a WRITE, ARM or FIRE flag can be set and that for each flag there is a respective yes or no flag as shown in fig 3.

**Please note that statements as to possible future acts or that one or more status flags must be set high before another status flag is essentially a method limitation or a statement of intended or desired use and does not serve to patentably distinguish the claimed structure over that of the references. See In Re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 152 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.**

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed

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apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2<sup>nd</sup> 1525, 1528

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon, does not serve to limit an apparatus claim.

Claim 15, an electronic blasting system comprising: a) a blasting machine (14) a bus (dotted lines connecting item 14 to items L1 and L2) and at least one electronic detonator (10) having one or more status flags in Figures 1-8, the rejection of corresponding parts above and claims 1-33.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as further showing the current state of the detonator art.


Including that Shann, Bauer et al., Ochi and Florin disclose methods of constant current charging.


10. Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L Greene Jr. whose telephone number is (571) 272-6876. The examiner can normally be reached on Mon-Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Carone can be reached on (571) 272-6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DIG   
April 7, 2005

  
MICHAEL J. CANONE  
SUPERVISORY PATENT EXAMINER